



Marriage and Household Structure in Rural Pre-Famine Finland, 1845–65

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On the basis of recent findings, independent rural households formed a safeguard against the excess mortality during the Finnish 1860s famine. In this article, an analysis of deanery level longitudinal panel data shows that an increase in the number of unmarried adults reduced the number of households. This suggests that the ability to marry not only had a role in determining the household structure but also by increasing the within-household inequality it facilitated the economic hardships in the pre-famine rural Finland.

Introduction

It has been widely held that pre-industrial societies were poor and unequal in terms of distribution of economic assets and agricultural land. This adversity has typically been perceived as an important source for the persistent vulnerability to economic shocks that occasionally manifested in food deprivation and in famines.¹ The mediating mechanisms and causal pathways are, however, still rather obscure.² According to recent findings, the prevalence of independent households buffered against the excess mortality experienced during the Finnish famine of the 1860s, suggesting that a household provided a safeguard against the livelihood threatening crop failures and the socioeconomic stress induced by the emerging famine conditions.³

Crude marriage rates and the extent of marital coverage declined substantially in several regions in pre-famine Finland.⁴ Covering the two pre-famine decades, this article reviews whether the famine mortality had its roots in the pre-famine

1 Ó Gráda, 2008; Campbell & Ó Gráda, 2011. On pre-industrial yields and agricultural productivity, see e.g. Broadberry, Campbell, Klein, Overton & van Leeuwen, 2015; Olsson & Svensson, 2010.

2 See e.g. Adger, 1999; Kelly & Ó Gráda, 2014; Bengtsson & Broström, 2011.

3 Voutilainen, 2015a; Voutilainen, 2016.

4 Voutilainen, 2016.

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household formation; did the marriage-restraining preventive check increase the vulnerability to harvest failures in the 1860s by limiting the formation of independent households.

The structure of the study is as follows: the next section reviews the literature concerning the European marital pattern, preventive check and their macro-economic outcomes. The third section presents evidence for the existence of West European marital system in Finland, the fourth section scrutinizes the question formally with statistical rigour, leaving it for the last section to present conclusions.

European Marital Pattern and Economic Development

According to popular generalization, societies that exhibited pre-industrial population dynamics governed by births rather than deaths were economically more advanced and may have even experienced transition to modern economic growth earlier.⁵ The population mechanism that entailed the reaction of births to alteration of economic conditions is widely known in its Malthusian by-name, the preventive check. The preventive check has been considered playing the eminent role in creating the so-called (West) European marital pattern (EMP) that is characterized by high average age at marriage, high share of population never marrying and family system dominated by nuclear families.⁶ As births out of wedlock were rather scarce in the pre-1800s societies, marriages constituted the governing variable in the population dynamics in this kind of a system.⁷ The East European marital pattern, influentially considered by Hajnal to prevail east of a line that ranged from St. Petersburg to Trieste, exhibited a social pattern vice versa: large extended households and marrying at younger ages.⁸

The EMP system has been considered precipitating economic development through three channels. First of all, it has been considered that the EMP entailed relatively good socioeconomic position for women in the society. This surfaced in high labour force participation, widow empowerment and spousal equality.⁹ Secondly, it has been suggested that the EMP increased human capital

5 E.g. Galloway, 1988; De Moor & Van Zanden, 2010; Carmichael, De Pleijt, van Zanden & De Moor, 2015.

6 Hajnal, 1965; Berkner & Mendels, 1978, 209. Carmichael et al consider that age at marriage is not sufficient to designate the EMP pattern. See Carmichael, De Pleijt, van Zanden & De Moor, 2015. The postponing of marriage is still evident in modern world in response to diminishing economic prospects, see e.g. Ermisch, 1999.

7 Partially the low share of births out of wedlock is spurious reflection of the pressure placed on the parents of the illegitimate child to marry prior to the birth. For general review see e.g. Voutilainen, 2015b.

8 Szoltysek has argued that that the existing models of household systems in preindustrial Europe are far too rigid to capture the actual diversity of family patterns of the Eastern Europe. See especially Szoltysek, 2008.

9 De Moor & Van Zanden, 2010, 4–7; Dennison & Ogilvie, 2014, 672.

investment.¹⁰ Through its coevolution with (or causal effect on) the labour markets, the late marriage and nuclear households may have led to more schooling, apprenticeship, servant training, and gender participation in education.¹¹ Greif has also suggested that the European nuclear family fostered corporative institutions such as guilds, cities, and universities, which created and diffused knowledge.¹² The third mechanism through which the EMP allegedly functioned was the effect it had on the population growth via the preventive check: restriction of marriage to those who could establish an independent household hindered population growth and ensured long-term per capita capital accumulation. According to the widely-adopted narrative, this property of the preventive check alleviated pressure imposed by excessive population growth on scarce resources and thereby aided avoiding famines and other subsistence crises.

This third feature is what appears to constitute a paradox *vis-à-vis* the Finnish famine history. While the recent empirical findings quite clearly suggest that Finnish demographic regime was preventive check dominated, famines of some magnitude happened reasonably often during the eighteenth and nineteenth centuries.¹³ Thereby it would appear that the preventive check alone was not a sufficient safeguard. Moring has actually shown that the Finnish family structure approached the West European system in the 1800s due to impoverishment and compulsory prolonging of marital formation.¹⁴ Concurrent with this, Dennison and Ogilvie have recently placed considerable scepticism on the positive implications of the EMP. According to them, the West European marital pattern was in no observable clear-cut relationship with female autonomy, increased human capital investment, or enhanced demographic responsiveness to economic conditions.¹⁵

The idea that nuclear household could actually have been a vulnerable form of habitation is not novel. Previous literature has emphasized its inherent vulnerability to a loss of individual adult members (esp. father and/or mother).¹⁶ Another important factor increasing the precarity of nuclear household dominated socioeconomic system is captured with the nuclear hardship hypothesis, according to which, the more widespread the nuclear family, and the more strictly the neo-local rules of marrying and leaving parental household were applied, the more important collective institutions were for the security of the individual in an event of

10 Foreman-Peck, 2011.

11 Dennison & Ogilvie, 2014, 672; De Moor & Van Zanden, 2010, 3.

12 Greif, 2006, 308–12.

13 Voutilainen, 2015b. Apart from war-related mortality surges in 1788–90 and in 1808–1809, after the 1740s peak mortality associated with harvest failures was experienced in 1763, 1833, 1835, 1856 and in the 1860s.

14 Moring, 1996; Moring, 1999. Prior to the general emergence of the EMP in Western Europe, the nuclear family behaviour was typical among the poor – and remained so throughout the pre-industrial era. See, *inter alia*: De Moor & Van Zanden, 2014, 11; Arkell, 1987.

15 Dennison & Ogilvie, 2014; Dennison & Ogilvie, 2016.

16 De Moor & Van Zanden, 2014, 23. See also Bengtsson & Broström, 2011, 121.

economic stress.¹⁷ This means that in order to counter fluctuations in the aggregate economy, the existence of the EMP necessitated the establishment of a collective social support system as an alternative to local kin networks. Extensive social security was, however, widely absent on a macro level or scattered in its coverage in early modern world.¹⁸ This implies that nuclear household structure coupled with the neo-local tradition had the inherent risk of increasing the number of individuals who didn't marry and who subsequently had little entitlement to economic support. If Finland grew poorer during the 1800s, as has been implied in several context¹⁹, and if the EMP was an institutional arrangement adopted in the century or so after the Black Death in an environment of rapidly expanding employment opportunities and relatively high remuneration²⁰, it is reasonable to ask what kind of welfare outcomes the EMP entailed in a stagnant or even contracting economy.

Two different factors might have been at play, however: over the short term the nuclear household structure and neo-locality may have increased vulnerability to economic shocks. But over the long-term, when the economy had time to adjust, it is quite likely that the transforming family system stipulated a decrease in the population growth alleviating this emerging social inequality. The duration of the macro-economic problems was thereby essential for the nuclear hardships to manifest in full force on societal scale. One-off harvest failures were conventionally repelled with the short-term aid routinely implemented in the pre-industrial societies, whereas long-term downturns eventually started to affect population composition due to declining population growth. Somewhere in between laid a region where a perfect storm was allowed to brew, just like the one in Finland, which still loomed in the distance in the early 1860s.²¹

The Economic Base of the Finnish Household System

EMP has been traditionally connected with the labour markets. Actually, De Moor and van Zanden proposed the Black Death-induced labour market shock as one of the leading candidates explaining the initial emergence of the EMP.²² The neo-locality was likewise connected to the functioning of the labour markets and a

17 A person had to leave the parental household to form a new one after marrying, see e.g. Laslett, 1988, 153. For Finnish interpretations see, *inter alia*: Ylikangas, 1968; Kaukiainen, 1973.

18 See e.g. Jütte, 1996.

19 For a review see Voutilainen, 2016, 120.

20 De Moor & Van Zanden, 2014, 3.

21 Ó Gráda, (1995, 162–8) and Voutilainen (2016, 113–5) argue that when interpreting the long-term determinants of famine escalation, the exogeneity of the pre-famine decline needs to be assessed. See also Geary & Stark, 2004. Rangasami (1985a, 1985b) makes a compelling case for understanding outbreaks of famine mortality as culminations of long social, political and economic processes.

22 De Moor & Van Zanden, 2014, 2. Labour market participation after the Black Death is covered in Broadberry, Campbell, Klein, Overton & van Leeuwen, 2015.

typical convention postulated that young men and women engaged in so-called life cycle service; they left their parental household to work as farm hands with annual contracts.²³

According to recent Finnish findings, however, the ability to obtain an annual worker post may have been hampered by various factors; freeholder peasants and crofters appear to have preferred their own sons over extra-household labour, decreasing chances of members of lower social classes to obtain labour contracts.²⁴ Probably even more importantly, the rural labour demand was sensitive to farmer incomes and thus to harvest fluctuations. As it was typical that Finnish servants with annual contracts were hired in late summer / early autumn, the success of harvest largely dictated whether farmers could afford to hire this relatively costly form of labour.

The existence of the nuclear family ideal and simultaneous assumption of the neo-locality could have given rise to substantial within-household inequality in the event that leaving the parental households was prolonged, either because of limited employment possibilities, or because marriage opportunities diminished. In this kind of environment the ideal of neo-locality may have been turned into a compulsory co-habitation. Distribution of socioeconomic power and access to resources in all likelihood skewed with the increased mean household size. The prolonged co-habitation may have worsened the socioeconomic position of those individuals that normally would have been assumed moving out of the parental household.

There were substantial spatial differences in the Finnish mean household sizes that persisted well into the 1900s.²⁵ The crucial factor considered explaining the large households in Eastern Finland compared with the western parts of the country was the wide adoption of slash-and-burn cultivation in the East. Slash-and-burn cultivation can be expected to increase mean household sizes as the poorest of agricultural population could scarcely obtain forest plots required and acquire sufficient labour force needed to undertake the labour intensive slash-and-burn cultivation. Cultivation of eastern and northern wildernesses induced population expansion in the early modern period, effectively mitigating the increase of the landless rural underclass in Eastern Finland. Diminution of suitable forest reserves

²³ Laslett, 1983, suggested that life-cycle labour may have provided a quasi-remedy to economic problems on the household level.

²⁴ Voutilainen, 2016, 142–3.

²⁵ Pekka Haatanen, *Suomen Maalaisköyhälistö. Tutkimusten ja Kaunokirjallisuuden Valossa*, (Helsinki, 1968), 242–3.

and development of legislation concerning the property rights of the woodlands eventually erased this safety valve.²⁶

The east-west disparity in household sizes has led to wide consensus that Finland was delineated into two distinct family systems. Sirén, who has provided the most vocal evidence for the distinction between the Western and Eastern Finnish family systems, has considered that as would be expected on the basis of the East European family model, the marriage was not a crucial factor determining the household formation in Eastern Finland. She therefore asserts that not only did not the Malthusian preventive check operate in the eastern parts of the country but that it did not constitute a significant factor in the formation of the family structure.²⁷

Nevertheless, it is easy to emphasize the dominant role of cultural traits and social conventions in the household formation, for example Berkner and Mendels have pointed out that it "would be a major error to view the peasant as a helpless creature forced to blindly follow the dictates of an inheritance system".²⁸ Voutilainen has provided interesting evidence: the Eastern Finnish pattern of the large mean household size tended to co-exist with low between-household economic inequality and with general absence of low-income households. This means that the poverty that was manifest in the extensive number of small low-income households in the Western Finland remained "trapped" within the households in the East. This furthermore implies that there existed an inherent trade-off in the inequality structure: small mean household size meant the existence of between-household inequality, large mean household size placed the inequality within the households.²⁹

The adversity fell on those people who remained living-ins and provided labour for the household but simultaneously retained vulnerability to shocks that affected the households' economic status and its labour demand. If the economic situation turned severe enough, it is likely that those members of the household that were considered "external" to the core-family were the first to be evicted. In the Finnish context this is clearly visible in the excess presentation of young adults (especially men) among the temporary migrants during the famine of the 1860s.³⁰

26 Luttinen, 2012; Korhonen, 2003, 406–407. According to the traditional common law practice the clearance for slash-and-burn cultivation determined property right to the field (Luttinen, 2012, 92, 98, 117. During the late-1700s, the so-called *isojako* land reform effectively restricted lower social classes' legal right to establish slash-and-burn cultivations, see e.g. Korhonen, 2003, 407–8. Jutikkala, 2003, observes that *isojako* abolished the prospect of upward social movement for landless population through slash-and-burn cultivation, which had existed prior to the reform. According to Pulma, (1994, 24), the slash-and-burn of the landless was often first and foremost tolerated, but not exactly endorsed during the 1600s. Jutikkala (1957, 202) considers that able-bodied landless with free prospecting rights to slash-and-burn may have been economically better off than the poorest of the freeholders. Heikkinen (1988, 76) argues, however, that at least in the early 1800s a rural workman could participate in a so-called "slash-and-burn cooperative" and obtain this way, through labour, the right to sow to these fields. See also: Pulma, 1994, 27; Luttinen, 2012, 98.

27 Sirén, 1999, 142–3. On the basis of the local evidence, and in line with the Hajnalian divide, the marital age seemed to have been lower in the eastern than in the western parts of Finland. See: Sirén, 1999, 115–6; Moring, 2003, 84–7.

28 Berkner & Mendels, 1978, 216.

29 Voutilainen, 2015a; Voutilainen, 2016.

30 Pitkänen, 1992.

The situation in the Finnish rural labour markets was made worse by the existing restrictions on free movement. The need to emigrate in search of employment and prospective marital partners has been stressed in importance especially when inheritance system and land partitioning disallowed access to land for the younger siblings.³¹ According to the Finnish poor relief laws it was however possible for the target parishes to deny the entrance of the migrants if it was suspected that the migrants were going to rely on the parish poor relief for subsistence. This kind of situation could easily arise if a person from an outside parish was planning to settle in without family or kinship that could provide support and was unable to find employment.³²

Analysing household formation in connection to the intra-household inequality may yield important clues concerning the distribution and production of welfare in pre-industrial era. As household and farming, even at the smallest scale, were key contributors to individual livelihood entitlements and social connections to the community the socioeconomic rules that dictated individual access to them most likely proved important especially during crises. This puts the household formation to the fore of interest, determinants of which are scrutinized in the following section.

Determinants of the Finnish Pre-Famine Household Formation

The analysis of household structure faces immediately the debate over the definition of a household. Arguably the most influential and widely-adopted definition and classification is provided by Laslett, who considers that household is particularly defined through shared location, kinship and activity, incorporating individuals within the households, considering servants as household members but not drawing a parallel between a family and a household.³³ De Moor and van Zanden define a household loosely as “a cooperative economic unit aimed at the fulfilment of the physical and emotional needs of its members” and interestingly is “characterized by certain inequalities ... between generations and sexes”.³⁴ Moring has emphasized, however, that static household classification system has “no place” in historical societies: the household had no beginning or end but was under

31 Berkner & Mendels, 1978, 209. As has been shown in several occasions throughout the medieval and early modern Europe, the high fertility resulted in downward social circulation due to the tendency of avoiding partitioning of freeholder land, constituting the key mechanism through which the land inequality developed, see e.g. Bekar & Reed, 2013; Dribe & Svensson, 2008; Clark & Hamilton, 2006; Moring, 1999.

32 Markkola, 2007, 212–3; Uotila, 2015, 49.

33 Laslett, 1983, 23–8.

34 De Moor & Van Zanden, 2014, 3.

a constant turmoil. Only when a house or land was divided can we actually observe births of new units.³⁵

Mean household size is not a straightforward measure of the household complexity, even though it is tempting to draw parallels between large households and existence of social extensions. As was generally the rule in Northern and Western Europe, the Finnish freehold farms usually consisted of 5 to 10 people: the peasant farmer and his wife, their children, a farm-hand and/or maid, and sometimes members of the older generation.³⁶ In his early analytical work, Burch considered that under nuclear and stem family systems, households never exceeded an *average* of ten, and while theoretical averages in the extended family system exceeded 20, figures this high are seldom, if ever observed in reality.³⁷ It thus appears reasonable to assume that household size could scarcely exceed ten without some form of social extensions. Concurrent with these, Moring has observed the mean sizes of the extended Finnish peasant households in the southeast corner of the country varied between 8.1 and 10.0 from the late-1810s to the mid-1870s.³⁸

The standard source providing information concerning pre-industrial Finnish social structure are the population tables that were compiled by the Lutheran priests. Under the national legislation, parish priests had to complete two separate statistical forms, the so-called population (census) and population change tables. A thorough population census listing e.g. population age structure and social class divisions was originally compiled every three years and from 1775 on information was gathered every five years. Annually compiled population change tables provide cause of death statistics, monthly number of vital events (births, deaths and marriages), and some breakdowns of these by social or marital statuses.³⁹

The data concerning the mean household size and the size distribution of households is obtainable on a spatial level from these registers. The data available in these tables is with all likelihood based on the communion books that listed households and their members.⁴⁰ The deanery (n=40 per year) population tables present a breakdown by household size: 2 or smaller, 3 to 5, 6 to 10, 11 to 15 and above 15.

The deanery data does not allow for qualitative considerations, *per se*. While the data is easy to operationalize, it leaves open source critical questions, such as whether we can reliably draw an inference based on the contemporary size

35 Moring, 1999, 181. See also (Wall, 1972, 159), who warns researchers that "the attempt to trace the history of [household] is fraught with considerable dangers..."

36 Gadd, 2011, 129–130.

37 Burch, 1970.

38 Moring, 1999, 170, 173. See also: Sirén, 1999; Partanen, 2004.

39 Pitkänen, Mielke & Jorde, 1989, 97; Pitkänen, 1993, 27–38.

40 See e.g. Uotila, 2014, 49–51. Various other documents such as the poll tax registers have been the standard source in spatially delineated studies, e.g. Moring, 1996; Moring, 1999; Sirén, 1999; Waris, 1999. For comparison of sources, see e.g. Voutilainen, 2016, 125–6.

distributions without knowing the exact basis for the size classification. Then again, the classification reflects contemporary perceptions concerning the household structure, not “artificial” later compilations – in addition, in this work we merely drop the categorization used in previous works (i.e. nuclear household, extended household etc.) and focus on the sheer number of households.

The household data provided in the population tables is highly useful in geographical analysis. While a representative spatial collection of age at marriage (a standard measure of the West European marital pattern) is an impossible task within this study, a proxy measure can easily be obtained on a macro level: the number of people married.⁴¹ As the focus of this article is on those whose marital aspirations were either postponed or even cancelled, we focus on the un-married adult population. If the Finnish family structure followed the West European pattern, we ought to observe negative association between the number of un-married adults and number of households; i.e. the fewer adult married the less households were correspondingly formed.

To study this effect, we use the deanery level longitudinal panel covering years 1845, 1855 and 1865.⁴² The dependent variable inspected is the *number* of household at year t , in a deanery i . The choice of count variable implies usage of appropriate regression models and due to over-dispersion, negative binomial regression was selected. The models were run in zero-truncated form as no deanery had zero number of households.⁴³ The size of the adult population (15 years and older) was used as an exposure variable, denoting the theoretical maximum number of households (i.e. how many times the dependent event could have happened). Time and place specific fixed factors are taken into account through the introduction of year and deanery specific dummy variables. This allows controlling for various heterogeneities that would severely obscure any cross-sectional analysis based on data from any singular year.

The main interest is in the coefficient between unmarried adults and households, but additional control variables were also introduced. First of all, the number of farm workers is used. Deanery tables designate both young adults with annual labour contracts and unmarried sons and daughters of farmers to the same class of “farm workers”. It is reasonable to assume that it should exhibit negative association with the number of households – as long as these people remained as farm hands (whether through a contract or through family connection), they generally remained outside of marital markets and needed not establish their own households.

41 Palm, 2000, 64–6, similarly uses the marital coverage to consider that Sweden displayed characteristics of the East European marital system in the 1620s, with the share of married (including widows) at 76.5 % of over 15 year olds. According to Pitkänen (1981, 278), 33.8% of women aged between 20 and 24 were married in rural Finland in 1880, while for men it was 17.1%. The relation switched after the mid-30s though - among 35 to 39 year olds, 81.7% of all men and 76.9% of all women were married.

42 Jyväskylä, Provincial Archives. Deanery population tables (1845, 1855, 1865): Microcards, 70–74, 88–92, 105–107, 109.

43 See e.g. Greene, 2000, 880–7; Osgood, 2000; Voutilainen, 2015a, 135–6.

Table 1. Zero-truncated negative binomial regression models of the number of households in rural Finnish deaneries, 1845–1865

	Dependent variable: Number of households			
	(1)	(2)	(3)	(4)
Farm workers	-0.0000104 (0.023)**	-0.0000126 (0.006)***	-0.00000112 (0.880)	0.00000688 (0.353)
Poor relief recipients		0.0000303 (0.031)**	0.0000581 (0.001)***	0.0000504 (0.004)***
Unmarried adults			-0.0000167 (0.020)**	-0.0000347 (<0.001)***
Lower social class				0.0000395 (0.023)**
Croft farmers				0.0000474 (0.056)*
Freeholders				0.0000475 (0.062)*
Constant	-1.107 (<0.001)***	-1.118 (<0.001)***	-1.070 (<0.001)***	-1.078 (<0.001)***
Fixed effects	YES	YES	YES	YES
P-value for likelihood ratio test, $\beta_i = 0, \forall i$	<0.001	<0.001	<0.001	<0.001
P-value for likelihood ratio test, $\alpha=0$	<0.001	<0.001	<0.001	<0.001
Pseudo R^2	0.137	0.139	0.142	0.148
N	117	117	117	117

Note: Time and deanery level fixed effects modelled using dummy variables. The size of the adult population (15 years and older) was used as an exposure variable.

Secondly we introduce the number of adults living on poor relief and those part of the lowest social classes. The relationship between the households and the number adults receiving public poor relief and the number of adults belonging to the lower social classes (e.g. lodgers and cottiers) is ambiguous and depends on the effect dominance. Entitlement to public poor relief was conditional on the unavailability of other sources (esp. family) of support and hence the recipients quite likely constituted distinct households by definition. The people of the lower social class tended to have some form of shanty dwelling (cottiers, *mäkitupalaiset*) but especially the lodgers abundant in the Eastern Finland often lived unsettled life among the farmer population. The latter group may have been variably recorded in the population tables. As long as this convention remained unaltered within the deanery throughout the timeframe of analysis, the fixed effects introduced here take these sources of heterogeneity into account. Based on these considerations,

it is likely that both the poor relieved and the lowest social groups tended to live in independent households.⁴⁴

Thirdly we introduce the number of freeholder and croft farms, which, quite apparently, ought to show a positive relationship to the number of households.

The results for the regression models are presented in Table 1. The diagnostics appear to be in order. Rejection of the dispersion restriction $\alpha=0$ ($p<0.001$) implies that data exhibits over-dispersion and the Poisson model would be unsuitable.

The coefficient of main interest, that between unmarried adults and the number of households, is indeed negative and in the fourth model with the most elaborated structure highly significant. This means that the increased number of unmarried adults translated into fewer households. The large eastern households appear to coexist with low marital coverage, a feature in line with neo-local household rule.⁴⁵ This coexistence of large households and low marital coverage is not without West European counterparts – the pattern was most evident in the post-famine Ireland in the latter half of the 1800s.⁴⁶

The coefficient for the farm workers is negative, but loses the significance after the introduction of the number of unmarried adults. This means that the farm workers tend to be without own households, but the effect apparently stems from their marital status.

The poor relief recipients appear to have formed independent households. The finding is interesting, but due to reasons pointed out earlier, not particularly surprising. In order to get public aid one had to be without other forms of aid, including from close family and kin, and thus it can be stated that the positive coefficient is (partially) a product of selection bias – you had to have an independent household in order to be eligible for the poor relief.

The same applies, at least partially, to the lower social classes, cottiers and lodgers. Their small household sizes have been recently detected in Finnish literature, adding to the routine finding that lower social classes tended to occupy their own small households.

Freeholders and crofters, as expected, increase the number of households. Farming livelihoods captured by these two variables were not however up for grabs for everyone. Access to freeholder and croft farms was greatly dictated by land partitioning legislation and inheritance agreements. As was the case in restricted

44 “Independence” refers here to the household structure. Until 1865 (and in a certain form until the 1880s), the Finnish labour and movement legislation was marked by system of so-called legal guardianship, which (i) hampered free movement of labour and (ii) tied segments of the adult landless population (over-15s) under those with ‘legal’ occupations (e.g., farmers, traders, industrialists etc.), for a review see Frigren, 2016, 78–82.

45 See also Voutilainen, 2016, 127–128.

46 Guinnane, 1997; Curran, 2015, 37. It is worthwhile highlighting that Guinnane perceives the decline in marital coverage in Ireland greatly a voluntary process – increasing unwillingness to accept the burdens of marriage and a family because it was less important to satisfying the economic goals that marriage had once served.

movement of labour, here too the legislative environment influenced how an individual could obtain a secure livelihood.

How large an effect did remaining unmarried have on the number of households? At face value the coefficients appear tiny. This is merely an illusion: the response is in logarithms. Because of this non-linearity, no straightforward calculation (e.g. as in slope) can be done to illustrate the actual significance of the effect. As an example, a coefficient of -0.0000347 means that given a population of 26000, with 5300 households and 7800 unmarried adults (corresponding e.g. to the deanery of Länsi-Raasepori in Southern Finland in 1865), a decline in the number of unmarried to 7500 results to an increase in the number of households to 5428.6 and results to a decline in the mean household size from 4.91 to 4.79, *ceteris paribus*. So, a decrease of 3.8% in the number of unmarried resulted in a decrease of 2.4% in the mean household size, corresponding to point-elasticity of c. 0.63, an estimate which is not only statistically significant but also economically important.

Conclusion

This article inspected whether remaining unmarried had an effect on the Finnish household structure. Previous studies have shown that Finland experienced the marriage reducing reaction to economic decline in the mid-1800s. This is congruent with the macro-level findings which have shown that crude marriage rates displayed a positive connection to fluctuation in real wages; i.e. the preventive check.

Recent literature has suggested that availability of households, either through access to cultivation or through social ties to the community they provided, decreased spatial famine mortality during the 1860s. This implies that the preventive check may actually have increased the risk of large-scale population crisis in the mid-1800s Finland due to increase in the intra-household inequality.

This study shows that household formation and preventive check were connected and inability to marry was associated with fewer households. Thereby it provides tentative evidence that the preventive check may actually have increased rural precarity in the pre-famine decades.

The regression results also show that land partitioning and rental farming had an expected positive effect on the household formation. This highlights that the legal restrictions that were in place during the era severely affected the peoples' abilities to obtain livelihood security. Social conventions and legal environment shaped the inequality that ultimately manifested as the famine in the 1860s after a string of crop failures provided an external shock large enough to disintegrate the social and economic structures that were able to buffer against livelihood threats in normal harvest years.

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